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Plaintiffs Emsat Advanced Geo-Location Technology, LLC (“EMSAT”) and Location Based Services LLC (“LBS”) hereby submit their Opening Brief on Claim Construction.¹

I. INTRODUCTION

In the late 1980s and early 1990s, the cellular telephone business was vastly different than today. There were hundreds of small cellular carriers whose “home” coverage areas were generally limited to local geographic zones defined by a patchwork of borders. Sygnet Communications based in Youngstown, Ohio was one such small carrier.

Back then, whether or not a cellular subscriber was located in a carrier’s “home” coverage area was important to both the carrier and the subscriber. A carrier was entitled to full revenues only from subscribers placing or receiving calls from inside the home coverage area. And when subscribers placed or received calls from outside the home coverage area (in other words, from a “visited” area), revenues were shared among “home” and “visited” carriers through roaming agreements. This is not to mention that subscribers placing calls from visited areas were assessed expensive “roaming” charges.

At the time (and even today), a subscriber’s presence in a carrier’s home coverage area was founded on whether the subscriber’s call was captured by a home coverage area cell tower. Capture depended on the strength of the signal between the phone and the tower. Because of the nature of electromagnetic signals, as affected by geographic and other factors, calls placed or received by subscribers within a carrier’s home coverage area, particularly near borders, were not always acquired by the carrier’s home towers. They could be intercepted, instead, by towers

¹ All lettered exhibits referenced in this brief are authenticated in the Declaration of Edward R. Nelson, III in Support of Plaintiffs’ Opening Brief on Claim Construction, Ex. 2.

located across coverage area borders. This created revenue sharing problems and led to improper roaming charges (often referred to as the “false roaming problem”).

The false roaming problem was particularly vexing with respect to Sygnet subscribers driving near the company’s eastern service border along the Ohio/Pennsylvania line. In and around East Liverpool, Ohio, a bluff overlooks Ohio Rt. 7 running next to the Ohio River. Because of the bluff, Sygnet’s cell towers failed to reach its subscribers driving on Rt. 7 (despite being in Sygnet’s home coverage area). Instead, competitor towers in Western Pennsylvania acquired the subscriber calls. Sygnet lost this revenue, and Sygnet subscribers incurred large roaming charges as a consequence.

Sygnet’s management asked Everett Dennison, one of its chief engineers, to solve its false roaming problem. His solution involved the use of position determining technologies like the Global Positioning System (“GPS”). In other words, Mr. Dennison conceived of using a subscriber’s actual location, rather than the strongest signal between phone and cell tower, to eliminate false roaming charges.

Mr. Dennison worked with others at Sygnet (the named co-inventors) to cultivate the concept. The system they developed distributed actual subscriber location through the cellular network, allowing subscriber positioning information to be stored and processed at different points in the network in order to support location-based call routing.

The inventors realized that their solution to the false roaming problem had other applications as well. For instance, services such as taxing, billing, and emergency assistance could be provided based on a subscriber’s location. These and other related inventions resulted in a number of U.S. patents, including the patents at issue in this case (collectively, the “Dennison patents”).

Sygnnet continued to operate and grow until the mid-1990s. But as Sygnnet's owners considered implementing inventions of the Dennison patents, they realized that large companies were starting to dominate the market. So Sygnnet offered itself for sale.

In 1998, a larger carrier, Dobson Wireless, acquired Sygnnet.² Prior to the acquisition, Sygnnet's principal owners purchased the Dennison patents from the company. The patents were ultimately transferred to a related company (controlled by the same owners) known as Emsat Advanced Geo-Location Technology, LLC, one of the plaintiffs here.

II. SUMMARY OF THE ARGUMENT

The disputed constructions follow a consistent pattern. Plaintiffs' claim construction positions adhere to *Phillips v. AWH Corp.*, by according ordinary and customary meanings to subject terms and phrases, as those terms and phrases would be understood by a person of ordinary skill in the art in view of the claim language, the intrinsic record, and ordinary usage in the field.

Conversely, Defendants' constructions are artfully crafted to "build in" non-infringement defenses. Virtually every proposed construction injects narrowing conditions that are either not suitably supported in the intrinsic record, or are wholly divorced from it, in an attempt to impermissibly limit claim scope.

III. LEGAL STANDARDS

Claim terms generally receive their ordinary and customary meaning, which is the meaning that a person of ordinary skill in the art would have understood the claim term to have as of the filing date of the patent application. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed.

² In keeping with the trend, in late 2007, Dobson was sold to a still larger carrier, AT&T Wireless, now known as AT&T Mobility LLC, a named Ohio Defendant.

Cir. 2005). “[U]nless compelled to do otherwise, a court will give a claim term the full range of its ordinary meaning as understood by an artisan of ordinary skill.” *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001). The Federal Circuit has cautioned courts from positing constructions that “contribute nothing but meaningless verbiage to the definition of the claimed invention.” *Harris Corp. v. Ixys Corp.*, 114 F.3d 1149, 1152 (Fed. Cir. 1997).

Nevertheless, in many instances, a court must proceed beyond the bare language of the claims. In this circumstance, “[i]t is well-settled that ... the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996); *see Phillips*, 415 F.3d at 1315-17. Claim construction is complete if the Court is able to ascertain an unambiguous meaning for the claim term after examination of the intrinsic evidence only. *Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1332 (Fed. Cir. 2001).

A. Intrinsic Evidence

1. The claims and specification are the most relevant sources.

The Court looks first to the patent, i.e., the claims and specification, to determine the meaning of words in the claims. *Phillips*, 415 F.3d at 1315-17. “It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Id.* at 1312. “[T]he claims themselves provide substantial guidance as to the meaning of particular claim terms.” *Id.* at 1314. “Other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term.” *Id.*

The specification is equally relevant. “The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the

end, the correct construction.” *Id.* at 1316 (quoting *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)).

2. It is improper to import limitations from the specification.

While this Court must review the patent specification, it reviews the specification only for the purpose of interpreting the claim’s stated terms, not to incorporate particular features exhibited in the specification into the claim. See *Saunders Group, Inc. v. Comfortrac, Inc.*, 492 F.3d 1326, 1332-33 (Fed. Cir. 2007); *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004).

As noted by the Federal Circuit, the respective roles of the claim language and the specification during the claim construction process are defined by two canons which sometimes appear in tension: “(a) one may not read a limitation into a claim from the written description; but (b) one may look to the written description to define a term already in a claim limitation.” *Renishaw*, 158 F.3d at 1248. Nevertheless, the Federal Circuit has repeatedly held that courts may not import limitations from embodiments disclosed in the specification in order to limit or otherwise vary the meaning of the claim language. *Liebel-Flarsheim*, 358 F.3d at 906; *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1327-28 (Fed. Cir. 2002); *Inverness Med. Switzerland GmbH v. Warner Lambert Co.*, 309 F.3d 1373, 1379 (Fed. Cir. 2002) (“It is improper to limit the claim based on a preferred embodiment of the invention”).

3. The Court must examine the prosecution history to assess any impact on claim construction.

Similarly, “[t]he prosecution history is relevant because it may contain contemporaneous exchanges between the patent applicant and the PTO about what the claims mean.” *Digital Biometrics v. Identix, Inc.*, 149 F.3d 1335, 1344 (Fed. Cir. 1998). Although

the prosecution history “lacks the clarity of the specification and thus is less useful for claim construction purposes,” it “can often inform the meaning of the claim language by demonstrating how the inventor understood the invention.” *Phillips*, 415 F.3d at 1317.

B. Extrinsic Evidence

Extrinsic evidence such as technical dictionary definitions, treatises, and witness testimony may aid the court in determining the meaning of claims; though it is “less reliable than the patent and its prosecution history in determining how to read claims terms.” *Phillips*, 415 F.3d at 1318. Extrinsic evidence may “help educate the court regarding the field of the invention and can help the court determine what a person of ordinary skill in the art would understand claim terms to mean,” but such evidence should be considered in the context of the intrinsic record. *Id.* at 1319. Extrinsic evidence cannot be used, however, to “vary, contradict, expand, or limit the claim language from how it is defined, even by implication, in the specification or file history.” *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1269 (Fed. Cir. 2001).

IV. DISPUTED TERMS AND PHRASES REQUIRING CONSTRUCTION³

Plaintiffs have asserted four separate but related patents: U.S. Patent Nos. 5,946,611 (“the ‘611 patent”), 6,324,404 (“the ‘404 patent”), 6,847,822 (“the ‘822 patent”), and 7,289,763 (“the ‘763 patent”). These patents claim priority from U.S. Patent No. 5,235,633 patent (“the ‘633 patent”), which was filed on December 26, 1991.⁴

In this case, each of the claims asserted against Defendants (including the disputed terms and phrases raised as part of claim construction) is fully supported by the written description in

³ The parties’ proposed constructions, including the lone, agreed construction, are set forth in Ex. 1.

⁴ These patents are attached, in referenced order, as Exhibits A-E.

the '633 patent, and each claim is entitled to draw priority from it. For this reason, Plaintiffs routinely cite to the specification of the '633 patent.

A. “Exact Geographic Location”

The parties dispute the proper construction of “exact geographic location,” found specifically in claims 1 and 5 of the '611 patent, claim 9 of the '404 patent, claims 21, 34, and 37 of the '822 patent, and claim 23 of the '763 patent.⁵ An example of how “exact geographic location” is used in the claims is illustrated generally by reference to claim 1 of the '611 patent:

C) determining the exact geographic location of the mobile unit placing the call requesting emergency service;

(Ex. A, '611 patent, 6:65-67) (emphasis added).

The proper construction of “exact geographic location is: **“A position in latitude and longitude having a degree of accuracy and precision typical of that obtained from a Global Positioning System (GPS), LORAN, or other position determining system.”** This construction is concretely supported in the original '633 patent specification.

The '633 patent states that the invention makes decisions “based on the location of a mobile unit rather than on the strength of the signal associated with that mobile unit.” ('633 patent, 3:32-35). Specifically with respect to locating a mobile unit, the '633 patent notes:

The exact location of each mobile unit [cell phone] is determined using a Global Positioning System (GPS), LORAN, or other position determining system. The NAVSTAR global positioning system, or GPS, is a system employing ultimately eighteen satellites . . .

(Ex. E, '633 patent, 3:35-39) (emphasis added).

⁵ Asserted claims 26, 31, and 32 of the '763 patent depend from claim 23 and, by extension, include the term, “exact geographic location.”

Based on the signals received from the satellite, the exact position in longitude and latitude of the ground-based receiver [cell phone] can be determined with an extremely high degree of accuracy and precision.

(Ex. E, '633 patent, 3:57-61) (emphasis added).

It is understood that the GPS is used as an example of the preferred source of positional data; however, other sources similar to the GPS can be used without departing from the scope of the present invention. All that is required is that the source of positional data be able to generate precise and accurate locational data on a fixed or a rapidly moving object.

(Ex. E, '633 patent, 5:64 - 6:3) (emphasis added). Thus, Plaintiffs' construction captures the intended aspects of "exact geographic location" — (i) a position in latitude and longitude and (ii) an accuracy and precision typical of GPS or similar system — without injecting or imposing unintended, extraneous limitations.

Though Defendants agree with Plaintiffs that a "geographic location" is "a position in longitude and latitude," they offer two separate, competing constructions for the entire term, "exact geographic location." Both of their proposed constructions violate basic claim construction principles and are improper for at least the following reasons.

1. Centennial's proposed construction falters for including improperly subjective and limiting language.

(a) "A precise and accurate position"

Centennial contends that "exact geographic location" should be construed to mean "a precise and accurate position in latitude and longitude that is not determined using cell site location, cell site ID, coverage area, signal strength, two-way ranging, or hyperbolic ranging." (emphasis added). It makes this contention without regard for what "precise and accurate" means, thereby improperly introducing a subjective element into the claims. What is precise and accurate? How precise and accurate does the position in latitude and longitude have to be? Centennial's proposed construction raises more questions than it answers.

Plaintiffs' construction, on the other hand, supplies an objective benchmark that a person of ordinary skill in the art can readily comprehend and implement, i.e., "having a degree of accuracy and precision typical of that obtained from a Global Positioning System (GPS), LORAN, or other position determining system." In other words, "exact" is a function of the precision with which known positioning determining systems make latitude and longitude calculations.

Indeed, the patents-in-suit have always contemplated a high degree of accuracy and precision without the accuracy and precision being absolute. As noted above, the specification of the original '633 patent states that "the exact position in longitude and latitude of the ground-based receiver can be determined with an extremely high degree of accuracy and precision." (Ex. E, '633 patent, 3:58-61). An "extremely high degree" of accuracy and precision (e.g., not perfect) does not mean absolute accuracy and precision.

Moreover, the '633 patent states that "[t]he exact location of each mobile unit is determined using a Global Positioning System (GPS), LORAN, or other position determining system." (Ex. E, '633 patent, 3:35-37). Inherent in this disclosure is that the "exact location" or "exact geographic location" can only be as "exact" as the position determining system itself.

In other words, the patentees contemplated that the degree of accuracy and precision is necessarily controlled by the position determining system(s) employed:

[T]he cellular system 20, while similar in all other respects to the cellular system illustrated in FIGS. 2 and 3, includes means for accurately and precisely determining the exact position of the mobile unit

* * *

The means for accurately determining the precise position of the mobile unit includes a Global Positioning System.

(Ex. E, ‘633 patent, 5:22-26, 30-32) (emphasis added). Thus, Plaintiffs’ construction — which specifically incorporates patentee language on position determining systems — provides an objective benchmark on the accuracy and precision required of “exact geographic location” as used in the asserted claims.

(b) “Not determined using cell site location, cell site ID, coverage area, signal strength, two-way ranging, or hyperbolic ranging”

Centennial’s proposed construction of “exact geographic location” seeks to exclude the use of the following factors or methods in determining mobile unit location: “cell site location, cell site ID, coverage area, signal strength, two-way ranging, or hyperbolic ranging.” Centennial wants to limit the construction (and, therefore, the claims) in this manner to avoid infringement when a location technology (such as GPS) — which plainly obtains “exact geographic location” as used in the claims — is augmented with a primitive location method (such as cell site location).

For instance, Defendants employ, at least in part, a location determining system called Assisted GPS (A-GPS). A-GPS uses GPS to determine the positional coordinates of the mobile unit for purposes of “exact geographic location,” but it also uses cell site location to help the GPS expeditiously find the correct satellites. By virtue of its improper exclusionary language, Centennial’s proposed construction serves no other purpose but to buttress a non-infringement position.

2. MetroPCS improperly limits the construction in a similar, exclusionary fashion.

MetroPCS believes that “exact geographic location” should be construed as “a position in latitude and longitude that has a degree of preciseness greater than that derived from cell site location (i.e., measurements related to cell site id, cell sector or signal strength).” Besides the fact that MetroPCS’s construction is not as technically consistent with the intrinsic record as

Plaintiffs' construction, the parenthetical is improper to the extent it means that determination of the "exact geographic location" cannot involve "measurements related to cell site id, cell sector or signal strength." As demonstrated in section A.1.(b), above, this is not the case. The patentees clearly left open the type of position determining system that can be implemented, as long as the system generates a position in latitude and longitude typical of that rendered by GPS, LORAN, and the like.

3. "Exact geographic location" is definite and easily understood by a person of ordinary skill in the art.

Defendants jointly contend that "exact geographic location" is indefinite. Defendants bear the burden of proving indefiniteness. Unless and until they do, the presumption of validity dictates the opposite. *See* 35 U.S.C. § 282.

In any event, the preceding discussion establishes that a person of ordinary skill in the art would easily understand the meaning of "exact geographic location," as proffered by Plaintiffs, thereby making it definite and valid pursuant to 35 U.S.C. § 112, ¶ 2. The intrinsic record clearly informs the meaning of the term and, when construed as intended by the patentees, "exact geographic location" is "sufficiently precise to permit [Defendants] to determine whether or not [they are] infringing." *Morton Int'l, Inc. v. Cardinal Chem. Co.*, 5 F.3d 1464, 1470 (Fed. Cir. 1993). In other words, if Defendants' networks employ a positioning determining system that renders the position of mobile units in latitude and longitude (such as GPS or LORAN), then their networks calculate "exact geographic location."

B. "Determining the Exact Geographic Location of the Mobile Unit"

Plaintiffs believe that no construction of this phrase (found only in claim 1 of the '611 patent) is necessary apart from the construction of the constituent term, "exact geographic

location.” The phrase should otherwise be accorded its plain and ordinary meaning, which is best recognized by the express words. Centennial agrees.

However, MetroPCS seeks to have this phrase (and two other terms/phrases discussed at sections IV.H. and IV.I., below) construed with an improper limiting caveat. MetroPCS would construe this particular phrase to mean, “calculating the exact geographic location of the mobile unit, wherein the mobile unit independently calculates its position using logic circuitry in the mobile unit.” (emphasis added).

MetroPCS’s construction is not only unnecessary, but incorrect because it impermissibly restricts the determination of the exact geographic location to “logic circuitry in the mobile unit.” Such a construction excludes disclosed embodiments. For instance, the specification of the original ‘633 patent describes a well-known positioning system, LORAN (Long Range Aid to Navigation). (Ex. E, ‘633 patent, 3:35-38). LORAN is a radio navigation system using land-based radio transmitters and receivers to determine position, as opposed to logic circuitry exclusively in the mobile unit. (See Ex. F, U.S. Dept. of Homeland Security, Navigation Center, *The LORAN-C User’s Handbook*, COMDTPUB P16562.6 (1991), at Ch. 1, p. 2). Thus, there is simply no basis for MetroPCS’s restrictive language.

C. “Subsequent Service”⁶

The parties dispute the construction of “subsequent service,” found in claims 21, 34, and 37 of the ‘822 patent. An example of how “subsequent service” is used in the claims is

⁶ Plaintiffs have modified their construction of “subsequent service” from that proposed in the parties’ Joint Claim Construction and Prehearing Statement. [Dkt. No. 95]. The change was made to more accurately reflect the term’s meaning based on the intrinsic record and to otherwise resolve any potential ambiguity caused by terminology used previously.

illustrated generally by reference to claim 10 of the ‘822 patent⁷:

a data storage system for recording said exact geographic location and specific mobile unit identification for use in subsequent services.

(Ex. C, ‘822 patent, 18:20-22) (emphasis added). The proper construction for the phrase “subsequent service” is: **“A service occurring during a call in progress, including emergency 911, taxes, communication process rating, message unit, customer service frequency selection, changing frequencies, changing cell site (handover) and changing cell system.”** This is the precise construction given “subsequent services” by the Examiner in connection with the September 28, 2009 Request for *Inter Partes* Reexamination of the ‘822 patent filed by Cellco Partnership (d/b/a Verizon Wireless), one of the defendants in related litigation in Ohio. (See Ex. G, Decision on Request for Inter Partes Reexamination, 12/22/09, p. 12).

In deciding to grant the reexamination,⁸ the Examiner undertook a detailed analysis of the meaning of “subsequent services” in light of the intrinsic record. The Examiner started with the patentees’ discussion of “subsequent services” in the ‘822 patent prosecution history. Specifically, the patentees made clear that the “subsequent services” element “permits subsequent use of [recorded] exact geographic location for purposes such as provisioning emergency services, rate, message unit, tax, billing, location or other proper services on calls already in progress.” (Ex. H, Response to Office Action, 12/29/03, p. 15) (emphasis added).

⁷ Asserted Claim 21 depends from claim 10 of the ‘822 patent and, thus, necessarily includes the claim 10 limitations.

⁸ On June 5, 2009 and June 8, 2009, the PTO denied requests made by Sprint for *ex parte* re-examination of the ‘611, ‘822, and ‘763 patents, and denied the request as to the ‘404 patent except with respect to Claim 38, which is not being asserted in this action. Those denials were appealed by Sprint to the Director of the PTO. The appeal regarding the ‘404 patent was denied on December 30, 2009. The appeal regarding the ‘611 patent was denied on March 15, 2010. The appeals regarding the ‘763 and ‘822 patent are still pending. Cellco filed an *inter partes* reexam request on the ‘822 patent only.

The Examiner then looked to the claims of the ‘822 patent. “Subsequent services” first appears in independent claim 10 (see graphic above), and the Examiner noted that “[c]laim 21 further limits claim 10, disclosing that the [exact geographic] location is accessible for emergency services provisioning, and claim 22 further limits claim 10 such that the location is accessible for ‘rate, message unit, tax, billing or location services provisioning.’” (Ex. G, Decision on Request for Inter Partes Reexamination, 12/22/09, pp. 10-11). The Examiner then reasoned:

These recitations [in claims 21 and 22] parallel those listed in Patent Owner’s statement of 12/29/2003 and as such the Examiner asserts that for the purposes of this proceeding, ..., for claims 21 and 22 to properly further limit claim 10 the ‘subsequent services’ of claim 10 rightly means those features disclosed in the instant specification affected **during calls in progress**, namely billing, emergency 911, taxes, CP rating, customer service (‘location services provisioning’ of claim 22), frequency, changing frequency, changing cell site and changing cell system, **disclosed as blocks 120-127 in the left hand side of FIG 8** ... and col. 12 l. 59-col. 13 l. 5 of the instant specification ... as well as message units, disclosed in the incorporated-by-reference parent ‘633 Patent.

(Id., p. 11) (emphasis added).

Based on the analysis, as supported by the references he relied upon, the Examiner concluded that “the ‘subsequent services’ of e.g. claim 10 is properly construed by the Office as services occurring during a call in progress, including emergency 911, taxes, CP rating, message unit, customer service frequency selection, changing frequencies, changing cell site (handover) and changing cell system.” (Id., p. 12). The Examiner recently reiterated his analysis and construction of “subsequent services” in a March 16, 2010 Office Action. (Ex. I, Office Action in Inter Partes Reexamination, 3/16/10, pp. 9-11). Notably, the Office Action confirms asserted claim 21. (See id., p. 17).

Defendants would construe “subsequent services” to mean “subscriber services occurring after the communication process between the network and the specific mobile unit has ended.”

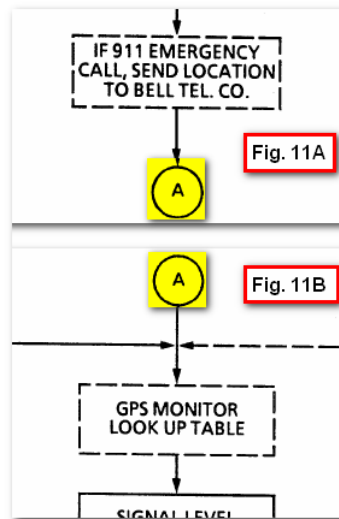
(emphasis added). The idea that a “subsequent service” occurs “after the communication process ... has ended” is wrong to the extent it implies that the call has ended.

The intrinsic support cited and relied upon by the Examiner in the ‘822 patent reexam clearly establishes that “subsequent services” are those occurring during a call in progress. Figures 11A and 11B of the original ‘633 patent reinforce the point.

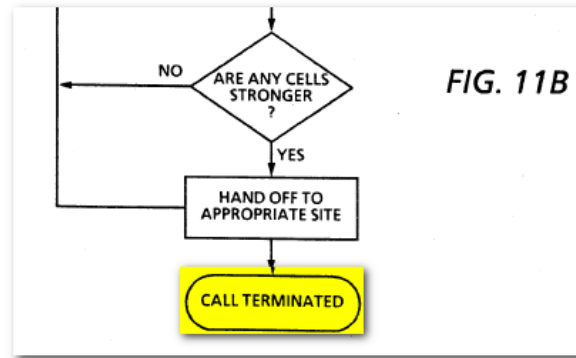
Figures 11A and 11B make up a single flow chart that is spread across two separate pages.

FIG. 11A and 11B comprise a flow chart illustrating a call sequence between a mobile unit and another unit in which switching decisions are made based on the position of the mobile unit rather than the strength of the signal associated with the mobile unit.

(Ex. E, ‘633 patent, 5:10-14) (emphasis added). Figure 11A is connected to Figure 11B at the encircled “A” shown on each graphic below:



When Figures 11A and 11B are properly considered as one, it is clear that the “subsequent service,” e.g., 911 Emergency Call, is offered during the call in progress before its termination at the end of Fig. 11B, shown below (emphasis added):



D. “Location-Based Service”

The parties dispute the proper construction for the term “location-based service,” found specifically in claims 23 and 32 of the ‘763 patent. An example of how “location-based service” is used in the claims is illustrated by reference to claim 23:

receiving a request for a **location-based service** from the mobile unit;

(Ex. D, ‘763 patent, 18:46-47) (emphasis added).

The proper construction for the term “location-based service” is: **“A service providing information based, at least in part, on the location of the mobile unit.”** This proposed construction is wholly consistent with the patentees’ intent. For instance, when commenting on the Examiner’s reasons for allowance of the ‘763 patent, the patentees wrote:

A location-based service is a service that provides information based at least in part on the location of the requesting mobile unit. Such a service is disclosed in the pending application (see for example paragraphs 26, 27, 80, and figure 9B, which describe an emergency call service request being sent from the mobile unit to an emergency response system or law enforcement agency, along with the location of the mobile unit).

(Ex. J, Comments on Statement for Reasons for Allowance, 9/21/07) (emphasis added).

The proposed construction is also wholly consistent with the specification of the ‘763 patent. In discussing Figure 9B and its relevance to a specific location-based service such as E-911, the ‘763 patent specification states as follows:

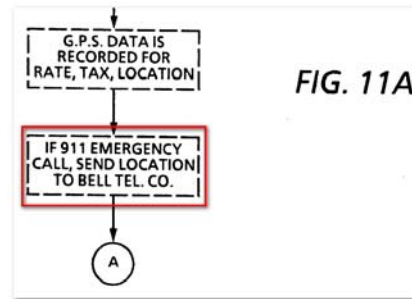
If a communication process is determined to be a 911 emergency call, then the system identifies the proper routing of the emergency communication process, blocks 407, 408 and 409, and the communication process will be directed to the proper emergency response system. The routing of this emergency call should be accompanied by all of the information that is pertinent and available, blocks 410 and 411. If the exact geographic location (EGL) continues to change, updates should be sent to the serving emergency response system, block 412. If another emergency response system needs to gain control of the call, the system will be able to establish a connection with the new emergency response system, block 413. This event is then recorded upon completion, block 414.

(Ex. D, ‘763 patent, 12:30-44; Fig. 9B) (emphasis added). In other words, in providing a location-based service like E-911, the subject network routes the emergency call to the appropriate emergency response system based on the location of the mobile unit and provides the response system with the mobile unit EGL and, perhaps, other “pertinent and available” information (such as the identity of the communications provider, mobile unit ID, etc.).

Defendants contend that “location-based service” should be construed to mean “wireless communications service provided based, at least in part, on the location of the mobile unit.” (emphasis added). This proposed construction provides no indication of what Defendants mean by, or consider to be, “wireless communication service.” It appears that Defendants would later argue that “wireless communications service” does not include certain location-based services that Defendants provide, such as wireless 911 and navigation. But there is no basis for limiting “location-based service” in this manner.

Even the original ‘633 patent explains that “[t]he mobile locating features of the system [of the present inventions] could also be important in other contexts, such as emergencies or the like.” (Ex. E, ‘633 patent, 6:54-56) (emphasis added). Specifically, Figure 11A (shown below)

discloses a service (e.g., 911 emergency call communication processing) that provides information (e.g., location information) based at least in part on the location of the requesting mobile unit.



(Ex. E, ‘633 patent, Fig. 11A) (emphasis added). There is simply nothing in either the ‘633 or ‘763 patents that indicates that “location-based services” are limited to some indeterminate concept that Defendants’ call “wireless communications service.”

And assuming that Defendants intend their construction to exclude certain location-based services (such as wireless 911), the composition of the ‘763 patent claims in which “location-based service” appears completely undercuts such an approach. Independent claim 23 (asserted here) contains the limitation, “receiving a request for a location-based service from the mobile unit.” (Ex. D, ‘763 patent, 18:46-47) (emphasis added). Dependent claim 25 (which necessarily narrows claim 23) specifies that the “request [for location-based service] is an emergency call.” (Ex. D, ‘763 patent, 18:58-59). Thus, in no way can “location-based service” be properly construed to (even arguably) exclude emergency services provisioning for it would eviscerate a dependent claim.

E. “Triangulation”

The proper construction for the term “triangulation,” found in claim 31 of the ‘763 patent, is: **“A method of calculating an unknown point, used by position determining systems such as LORAN, by forming a triangle having the unknown point and two known points as the**

vertices.” Triangulation is a well-known position determining method, which is defined in common dictionaries. For example, one common dictionary defines “triangulation” as “location of an unknown point, as in navigation, by forming a triangle having the unknown point and two known points as the vertices,” as proposed by Plaintiffs. (Ex. K, Webster’s II New Riverside University Dictionary (Houghton Mifflin Co. 1994), p. 1232).

Moreover, the ‘633 patent specifically states that “[t]he exact location of each mobile unit is determined using a Global Positioning System (GPS), LORAN, or other position determining system.” (Ex. E, ‘633 patent, 3:35-37) (emphasis added). LORAN is a position determining system specifically identified by the patentees that uses triangulation to determine position. (Ex. L, The American Heritage® Science Dictionary (Houghton Mifflin Co. 2002) (defining “loran” as “[a] long-range navigational system, in which a receiver’s position ... can be calculated by triangulation”)).⁹ As such, Plaintiffs’ proposed construction of “triangulation” is an appropriate amalgamation of the intrinsic record and a common dictionary.

F. “Override Criteria”

The proper construction of the phrase “override criteria,” found in claim 9 of the ‘404 patent, is: **“A preemptive rule for deciding, updating, or adjusting something.”** This construction is based upon the ordinary meaning of the words “override” and “criteria,” neither of which is technical or has any special meaning in the art.

A common meaning of the word “override” is “to prevail over; conquer.” (Ex. M, The American Heritage Dictionary, Second College Edition (Houghton Mifflin Co. 1982), p. 886). A common meaning of the word “criterion” (*pl.* “criteria”) is “a standard, rule, or test on which a judgment or decision can be based.” (Id., p. 341). Despite “criteria” technically being plural, the

⁹ Source location: <http://dictionary.reference.com/browse/loran>.

ordinary meaning of “criteria” for more than fifty years has been that it is singular. (Ex. N, Merriam-Webster Online Dictionary (Merriam-Webster Online 2010) (“The plural *criteria* has been used as a singular for over half a century”)).¹⁰ Combining the ordinary meanings of these terms provides Plaintiffs’ straightforward construction for “override criteria.”

Defendants contend that “override criteria” should be construed to mean “two or more rules that alter the operation of the system based on the exact geographic location of the mobile unit.” As a threshold matter, Defendants’ attempt to read “two or more” into “override criteria” is incorrect. As noted above, long before the patents were filed, the common meaning of “criteria” has been that it is singular. This is how “criteria” was used by the patentees, and this is how it was understood by the PTO.

For instance, the patentees used “override criteria” as part of a Markush group, which is a listing of specified alternatives of a group in a patent claim. *See Abbott Labs. v. Baxter Pharm. Prods., Inc.*, 334 F.3d 1274, 1280 (Fed. Cir. 2003). “A Markush group is a sort of homemade generic expression covering a group of two or more different materials ... any one of which would work in the combination claimed.” *Id.* (quoting Robert C. Faber, *Landis on Mechanics of Patent Claim Drafting*, § 50, 5A, VI-5-6 (4th ed. 2002)) (emphasis added). “It is well known that ‘members of the Markush group are ... alternatively usable for the purposes of the invention.’” *Id.* (citation omitted). Thus, “members of the Markush group are used singly.” *Id.* at 1281 (citation omitted) (emphasis added).

The element from claim 9 of the ‘404 patent that includes “override criteria” reads as follows (emphasis added):

¹⁰ Source location: <http://www.merriam-webster.com/dictionary/criteria>.

B) establishing override criteria from a group consisting of billing, taxing, CP (communications process) rating, service requested by a user of a mobile unit and CMR (cellular mobile radio) system; and

(Ex. B, '404 patent, 17:33-36). The format of the claim element is that of a Markush group; therefore, each member of the “override criteria” is used singly, despite the fact that the word “criteria” is the plural of “criterion.”

It is also clear from the prosecution history of the '404 patent that the PTO considered “criteria” to be singular. During prosecution, the Examiner initially rejected claim 9 (originally numbered as claim 26). In so doing, the Examiner repeatedly referred to “override criteria” using the indefinite article “an,” as shown below (emphasis added):

Claim 26 deals with an override criteria. It would have been obvious to one of ordinary skill in the art, at the time of invention, to have provided such an override criteria in a mobile communications system in which cell sites are selected based upon the geographic location of the

(Ex. O, Office Action Summary, 6/25/98, p. 6) (emphasis added).

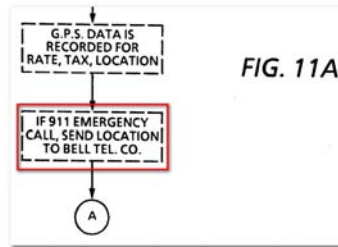
Additionally, Defendants seek to narrow the definition of “override criteria” by including the phrase “based on the exact geographic location of the mobile unit.” Given that the patentees used the phrase “exact geographic location of the mobile unit” in Step A of the claim, presumably they would have repeated it had they wanted to incorporate the phrase into the next two steps. Defendants’ construction essentially infuses an extraneous, limiting phrase in Steps B and C of the claim where it does not belong (and without any apparent basis for doing so).

G. “Service Provider”

The term “service provider” found in claim 9 of the ‘404 patent does not require construction because the ordinary meaning of the phrase is clear and unambiguous. Defendants seek to narrow the definition of “service provider” by qualifying it as a “provider of wireless communications service (i.e. wireless carrier).” Defendants are, again, trying to improperly narrow a claim term to avoid infringement.

The specification and claims of the ‘404 patent illustrate that when the patentees wanted to identify a specific type of “service provider,” they clearly knew how to do so. For example, the specification refers to both “wireless service provider[s]” and “emergency service providers.” (Ex. B, ‘404 patent, 6:26-28; 8:25-27). Of course, claim 9 refers to just “service providers” while other claims, e.g., claim 17, refer to “wireless over-the-air communications systems service providers.” (Ex. B, ‘404 patent, 17:29; 18:18-19). Both the specification and the claims of the ‘404 patent illustrate that “service providers,” unless modified accordingly, is a broader term that does not require construction. Its plain and ordinary meaning is clear: it refers to one or more providers of a service.

Moreover, emergency service providers (a subset of service providers omitted by Defendants’ construction) are clearly disclosed in the specification and drawings of the ‘633 patent. The specification states that “[t]he mobile locating features of the system [of the present inventions] could also be important in other contexts, such as emergencies or the like.” (Ex. E, ‘633 patent, 6:54-56) (emphasis added). And Fig. 11A, shown below, discloses that if the call is a 911 emergency call, the invention sends the location of the mobile unit to a telephone company for further processing.



(Ex. E, '633 patent, Fig. 11A) (emphasis added).

H. “Positioning System Obtaining a Position”

Plaintiffs and Centennial agree that this phrase does not require construction because its plain and ordinary meaning controls. When common terms are used in accordance with their ordinary lay meanings, as they are in the phrase “positioning system obtaining a position,” claim construction is simply unnecessary. *See Orion IP, LLC v. Staples, Inc.*, 406 F. Supp. 2d 717, 737-38 (E.D. Tex. 2005) (refusing to construe twenty-one terms submitted by the defendant because they were all used in accordance with their ordinary lay meanings). “[A]lthough every word used in a claim has a meaning, not every word requires a construction.” *Id.*

The subject phrase appears in claims 10 and 34 of the '822 patent.¹¹ The relevant limitation reads as follows:

a positioning system obtaining a position for said specific mobile unit identifying an exact geographic location of the specific mobile unit,

(Ex. C, '822 patent, 18:17-19; 20:1-3) (emphasis added). Similar to its proposed construction for “determining the exact geographic location of the mobile unit” (see section IV.B., above), MetroPCS seeks to impermissibly restrict the calculation of the mobile unit location to “logic circuitry in the mobile unit.” Specifically, MetroPCS would construe the phrase to mean, “system in which the logic circuitry in the mobile unit independently calculates a position of the

mobile unit in longitude and latitude.” (emphasis added). Such a construction excludes disclosed embodiments, including LORAN (a radio navigation system using land-based radio transmitters and receivers to determine position, as opposed to logic circuitry exclusively in the mobile unit). (See section IV.B.).

I. “Positional Data”

The term “positional data” appears in asserted claims 23, 26, 31 and 32 of the ‘763 patent. Plaintiffs and Centennial again agree that this term does not require construction because its ordinary meaning is clear and unambiguous. MetroPCS essentially repeats the same improper claim construction that it seeks for “determining the exact geographic location of the mobile unit” and “positioning system obtaining a position.” For the same reasons set forth in Sections IV.B. and IV.H., above, MetroPCS’s proposed construction for “positional data” should be rejected.

J. “Based on the Comparison Regardless of Cell Site Location”

The parties have stipulated that the proper construction for the phrase “based on the comparison regardless of cell site location,” found in claim 1 of the ‘611 patent, is: **“based on the comparison [of step E] instead of based on cell site location.”**

V. CONCLUSION

For the foregoing reasons and authorities, Plaintiffs EMSAT and LBS respectfully request that their proposed claim constructions be adopted by the Court.

¹¹ Plaintiffs are asserting claim 21 of the ‘822 patent, which depends from claim 10.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on the 26th day of March 2010, I electronically filed the foregoing document with the clerk of the court for the U.S. District Court, Eastern District of Texas, Marshall Division, using the electronic case filing system. The electronic case filing system sent a "Notice of Electronic Filing" to the attorneys of record who have consented in writing to accept this Notice as service of this document by electronic means.

/s/ Edward R. Nelson, III